

## ABSTRACT OF THE DISCLOSURE

A direct-current to direct-current conversion (DC/DC) apparatus includes a control circuit having an error amplifier for voltage control, basing the conversion on a pulse width modulation control using an output of the error amplifier. The error amplifier inputs a voltage signal corresponding to an output voltage of a DC/DC result and a plurality of reference voltage signals. The DC/DC apparatus also includes a soft start capacitor to provide one of the plurality of reference voltage signals. The error amplifier amplifies a difference between the voltage signal corresponding of the output voltage of a DC/DC result and a voltage signal of a lower potential among the plurality of reference voltage signals and carries out the pulse width modulation control. Furthermore, the control circuit includes a circuit for discharging charges corresponding to the output voltage of the DC/DC result when a power supply to the control circuit is turned off.